

polypeptides of a papillomavirus and DNA sequences coding for the late L1 and L2

polypeptides of a papillomavirus; said DNA sequences being placed under the control of

the elements necessary for their expression in a host cell or organism.

E1  
cont'd

40. (Twice Amended) The composition of claim 32, wherein said E6 and E7

polypeptides are nononcogenic variants of the native E6 and E7 polypeptides of a

papillomavirus.

E2

44. (Twice Amended) A composition consisting of (i) one or more recombinant vectors into which are inserted DNA sequences coding for the early E6 and E7

polypeptides of a papillomavirus and DNA sequences coding for the late L1 and L2

polypeptides of a papillomavirus; said DNA sequences being placed under the control of

the elements necessary for their expression in a host cell or organism and (ii) one or more

recombinant vectors into which is inserted a DNA sequence coding for one polypeptide

having an immunostimulatory activity wherein said DNA sequence is placed under the

control of the elements necessary for its expression in a host cell or organism and wherein

C3

said polypeptide having an immunostimulatory activity is selected from the group

consisting of interleukin-2, interleukin-7, the co-adhesion molecule B7.1 and the co-

adhesion molecule B7.2.

48. (Twice Amended) The composition of claim 44, consisting of one recombinant vector into which is inserted:

- 84
- (a) a DNA sequence coding for the E6 polypeptide of a papillomavirus, a DNA sequence coding for the E7 polypeptide of a papillomavirus, a DNA sequence coding for the L1 polypeptide of a papillomavirus, a DNA sequence coding for the L2 polypeptide of a papillomavirus and a DNA sequence coding for the co-adhesion molecule B7.1, or
  - (b) a DNA sequence coding for the E6 polypeptide of a papillomavirus, a DNA sequence coding for the E7 polypeptide of a papillomavirus, a DNA sequence coding for the L1 polypeptide of a papillomavirus, a DNA sequence coding for the L2 polypeptide of a papillomavirus and a DNA sequence coding for interleukin-2.

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49. (Amended) The composition of claim 48, wherein said E6 and E7 polypeptides are, respectively, nononcogenic variants of the native E6 and E7 polypeptides of a human papillomavirus.

50. (Amended) The composition of claim 49, wherein said nononcogenic variant of the E6 polypeptide is the native HPV-16 E6 polypeptide deleted of amino acids 111-115.

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cont

51. (Amended) The composition of claim 49, wherein said nononcogenic variant of the E7 polypeptide is the native HPV-16 E7 polypeptide deleted of amino acids 21-26.

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53. (Amended) A method for the treatment or prevention of dysplasia or cancer of the neck of the uterus, comprising administering an effective amount of the composition of claim 43 to a patient in need of such treatment.

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57. (Amended) The composition of claim 40, wherein said nononcogenic variant of the E6 polypeptide is the native HPV-16 E6 polypeptide deleted of amino acids 111-115.

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58. (Amended) The composition of claim 40, wherein said nononcogenic variant of the E7 polypeptide is the native HPV-16 E7 polypeptide deleted of amino acids 21-26.

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65. (Amended) A composition consisting of one or more recombinant vectors into which are inserted (i) DNA sequences coding for the E6 polypeptide of a papillomavirus and for the E7 polypeptide of a papillomavirus and (ii) one DNA sequence coding for a polypeptide having an immunostimulatory activity; said DNA sequences being placed under the control of the elements necessary for their expression in a host cell or organism and wherein said polypeptide having an immunostimulatory activity is selected from the group consisting of interleukin-2, interleukin-7, the co-adhesion molecule B7.1 and the co-adhesion molecule B7.2.

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74. (Amended) The composition of claim 65, consisting of one recombinant vaccinia virus from the Copenhagen or MVA strain into which is inserted a DNA sequence coding for the E6 polypeptide of HPV-16, a DNA sequence coding for the HPV-16 E7 polypeptide and a DNA sequence coding for interleukin-2.

75. (Amended) The composition of claim 65, wherein said E6 and E7 polypeptides are, respectively, nononcogenic variants of the native E6 and E7 polypeptides of a human papillomavirus.

69 76. (Amended) The composition of claim 75, wherein said nononcogenic variant of the E6 polypeptide is the native HPV-16 E6 polypeptide deleted of amino acids 111-115.

77. (Amended) The composition of claim 75, wherein said nononcogenic variant of the E7 polypeptide is the native HPV-16 E7 polypeptide deleted of amino acids 21-26.

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